

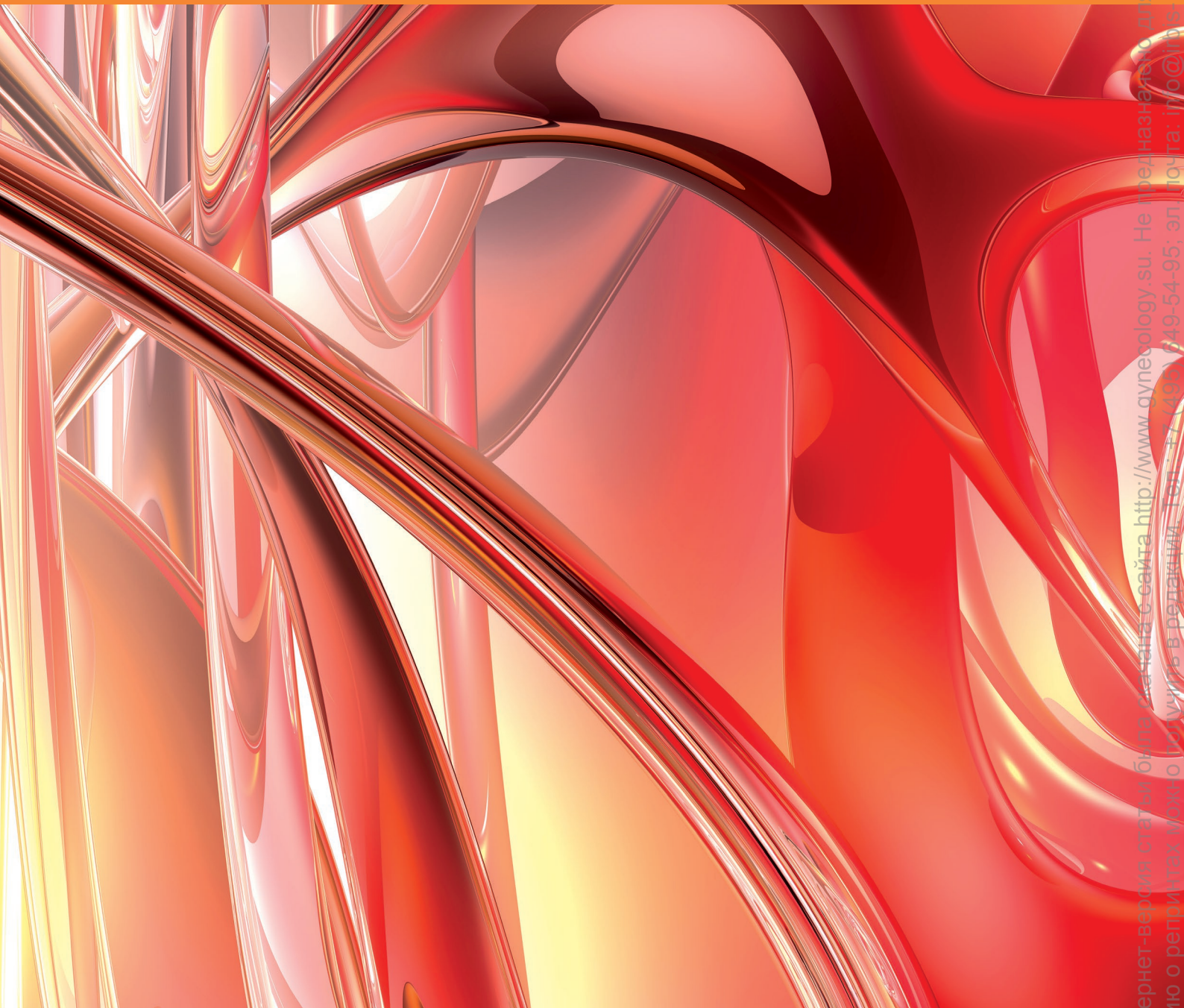
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# Quality of life assessment in perimenopausal women with abnormal uterine bleeding and endometrial hyperplasia

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## Abstract

**Aim:** to assess the effects of several symptoms on the quality of life (QoL) in perimenopausal women with endometrial hyperplasia and abnormal uterine bleeding (AUB).

**Materials and Methods.** This study was conducted from September, 2019 to June, 2020. In total, 50 women aged 45–55 years who visited gynecological department with complaints of AUB were randomly interviewed by using relevant questionnaire. MENQOL (Menopause-Specific Quality of Life Questionnaire) was used to assess and evaluate perimenopause related symptoms. Menopausal status was classified according to the definition of menopause proposed by the World Health Organization.

**Results.** The majority (the total of 97.14 %) of women experienced at least five or more menopausal symptoms. Vasomotor symptoms were recorded as hot flushes (80 %), sweating (70 %), and night sweating (62 %). The most common physical symptoms were frequent back pain in the lumbar region (96 %), decreased physical strength (92 %), generalized weakness, tiredness (90 %), weight gain (80 %), and pain in the neck (90 %). Among participants, there were reported various problems such as depressive feeling of unknown reasons (20 %), anxiety and nervousness (20 %), dissatisfaction with personal life (44 %), poor memory (14 %), low mood (14 %), as well as impatience and irritability (12 %). Sexual problems were reported as changed sexual drive (20 %), vaginal dryness (10 %), and few avoided intimate contacts with the partners (10 %). Menopausal status, educational level and body mass indexes as well as marital status were also studied as those among the multi-factors significantly associated with the frequency and severity of menopause related symptoms.

**Conclusion.** The severity of perimenopausal symptoms decreases the QoL in everyday life of women aged 45–55 years with endometrial hyperplasia and AUB.

**Keywords:** perimenopause, quality of life, perimenopausal related symptoms, endometrial hyperplasia

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## Оценка качества жизни женщин с гиперплазией эндометрия и аномальными маточными кровотечениями в перименопаузе

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## Резюме

**Цель исследования:** оценить влияние на качество жизни ряда симптомов у женщин в перименопаузе с гиперплазией эндометрия и аномальными маточными кровотечениями (АМК).

**Материал и методы.** Исследование проводилось с сентября 2019 г. по июнь 2020 г. Всего опрошено 50 женщин в возрасте 45–55 лет, обратившихся в гинекологическое отделение с жалобами на АМК. Для оценки симптомов, связанных с перимено-

паузой, использовали опросник качества жизни в менопаузе (англ. Menopause-Specific Quality of Life Questionnaire, MENQOL). Статус менопаузы классифицировался в соответствии с определением менопаузы ВОЗ.

**Результаты.** Большинство (97,14 %) женщин испытывали 5 или более симптомов, характерных для менопаузы. Вазомоторные симптомы проявлялись в виде приливов (80 %), потливости (70 %) и ночного потоотделения (62 %). Наиболее частыми соматическими симптомами были частые боли в пояснице (96 %), снижение физической выносливости (92 %), общая слабость, усталость (90 %), увеличение массы тела (80 %), боль в шее (90 %). Обследованные указывали на беспричинное чувство депрессии (20 %), беспокойство и нервозность (20 %), неудовлетворенность личной жизнью (44 %), плохую память (14 %), плохое самочувствие (14 %), нетерпеливость и раздражительность (12 %). Сообщалось о сексуальных проблемах в виде изменения полового влечения (20 %), сухости влагалища (10 %) и некоторых случаев (10 %) нежелания интимного контакта с партнерами. Установлено, что особенности менопаузы, уровень образования и индекс массы тела, семейное положение, которые также изучались, в значительной степени связаны с частотой и выраженностью менопаузальных симптомов.

**Заключение.** Тяжесть перименопаузальных симптомов снижает качество повседневной жизни женщин 45–55 лет с гиперплазией эндометрия и АМК.

**Ключевые слова:** перименопауза, качество жизни, связанные с перименопаузой симптомы, гиперплазия эндометрия

**Для цитирования:** Абдыева Ф.В. Оценка качества жизни женщин с гиперплазией эндометрия и аномальными маточными кровотечениями в перименопаузе. *Акушерство, Гинекология и Репродукция*. 2020;14(6):630–636. (In English). <https://doi.org/10.17749/2313-7347/ob.gyn.rep.2020.176>.

### Highlights

#### What is already known about this subject?

- ▶ The cessation of endocrine ovarian function during perimenopause leads to declined production of ovarian steroids – estrogen and progesterone.
- ▶ The deficiency of estrogen and progesterone is associated with various somatic, vasomotor and other symptoms that impair the quality of woman life (QoL).
- ▶ In recent years, the rate of various gynecological diseases, including endometrial hyperplastic processes has been increased, but limited information about QoL of perimenopausal women with endometrial hyperplasia is available.

#### What are the new findings?

- ▶ Intensity of menopausal symptoms lowers the quality of everyday life in perimenopausal women with endometrial hyperplasia.
- ▶ Age, education, socioeconomic status and active lifestyle significantly influence the rate and intensity of menopausal symptoms, as well as the QoL of post-reproductive women.
- ▶ The most frequent symptoms of perimenopausal women aged 45–55 years with complaints of abnormal uterine bleeding were physical (muscle pain, decrease in physical strength etc.) and vasomotor symptoms.

#### How might it impact on clinical practice in the foreseeable future?

- ▶ Owing to the timely MENQOL testing, it is possible to detect early symptoms of declined QoL, which will allow for medical-social correction in perimenopausal women.
- ▶ An integrative approach to lifestyle change aimed at eliminating associated conditions that worsen the QoL (overweight, low social and physical activity, etc.) will help to reduce the rate of menopausal symptoms.

### Основные моменты

#### Что уже известно об этой теме?

- ▶ Прекращение эндокринной функции яичников в перименопаузе, приводит к снижению выработки яичниками стероидных гормонов – эстрогена и прогестерона.
- ▶ Дефицит эстрогена и прогестерона связан с различными соматическими, вазомоторными и другими симптомами, ухудшающими качество жизни женщин.
- ▶ В последние годы увеличилась частота различных гинекологических заболеваний, включая гиперпластические процессы эндометрия, однако информация о качестве жизни женщин в перименопаузе с гиперплазией эндометрия ограничена.

#### Что нового дает статья?

- ▶ Выраженность симптомов менопаузы у женщин, имеющих гиперплазию эндометрия, снижает качество повседневной жизни пациенток данной категории.
- ▶ Возраст, образование, социально-экономический статус и активный образ жизни в значительной степени влияют на частоту и интенсивность симптомов менопаузы, а также на качество жизни женщин пострепродуктивного периода.
- ▶ Наиболее частыми симптомами женщин в перименопаузе в возрастной группе 45–55 лет с жалобами на аномальное маточное кровотечение были физические (мышечные боли, повышенная утомляемость, боли в пояснице), на втором месте – вазомоторные симптомы.

#### Как это может повлиять на клиническую практику в обозримом будущем?

- ▶ Благодаря своевременному тестированию MENQOL можно обнаружить ранние симптомы снижения качества жизни, что позволит провести медико-социальную коррекцию у женщин в перименопаузе.
- ▶ Интегративный подход к изменению образа жизни, направленный на устранение сопутствующих состояний, ухудшающих качество жизни (избыточная масса тела, низкая социальная и физическая активность и т. д.), поможет снизить частоту симптомов менопаузы.

## Introduction / Введение

The life expectancy of women has significantly increased throughout the world. According to expert opinions, the prevalence of women in peri- and postmenopause will reach as high as 1.2 billion subjects in 2030, so that it increases by 4.7 million annually [1]. Perimenopause is a universal and physiological event in woman life occurring around the age of 50 years and in the most developed countries featured with physiological transition from reproductive period towards old age. The cessation of endocrine ovarian function occurs during this period leading to declined production of ovarian steroids estrogen and progesterone. The deficiency of these hormones influence not only reproductive potential, but is also associated with various symptoms (vasomotor, somatic, psychological and sexual) negatively affecting the quality of female life (QoL). Complaints common to this condition include hot flushes, night sweats, dryness, depression, irritability, muscles and joint pains, headaches and sleep disorders, frequent urination, and cognitive impairment. The significant changes in manifested menopausal symptoms were reported in several studies worldwide [2]. J. Bereck-Gisolf et al. (2009) showed that even 7 years after the cessation of menstrual cycle, multiple related symptoms could persist [3]. The symptoms of menopause have been extensively studied in women from Western communities, but such data regarding women from non-Western ethnic groups are sparse. Some researchers report on differences in the prevalence of symptoms in Asian and Western women. In Latin America, the most reported symptoms included hot flushes (68.9 %), followed by sleeping disturbances (68.4 %) [4]. In Australia, menopause was associated mainly with hot flushes followed by night sweats [5]. In Egypt, the most common symptoms were fatigue as well as headache [6], whereas in the East and South-East Asia the most common complaint was joint and muscle pain [7].

It is quite evident that a severe symptomatology with the "domino" effect (nocturnal sweats altering sleep, tiredness leading to alteration of cognitive performance, physical performance and therefore low self-esteem and finally sexuality disorders) can profoundly affect the personal, social and QoL of women suffering from this transition period [8].

According to the SWAN study enrolled around 3,000 women, some of the menopausal symptoms (e. g. hot flushes, urinary leakage, night sweats, vaginal dryness) significantly lowered QoL [2, 9].

Recently, the rate and biological activity of various diseases, including hyperplastic endometrial processes, have been increased, which is associated with increased female life expectancy. To characterize the causes of abnormal uterine bleeding (AUB) in nongravid women of reproductive age, a classification PALM-COEIN was developed and proposed by the International Federation of Gynecology and Obstetrics Working Group on Menstrual Disorders [10]. In particular, it outlines the nine main

categories arranged according to the acronym PALM-COEIN: polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified. According to this classification system, a non-specific term like dysfunctional uterine bleeding should be avoided in favor of a more specific etiology such as ovulatory dysfunction.

Disordered proliferative pattern (20.5 %) is the most common pathology AUB. Less common causes are benign endometrial polyp (11.2 %), endometrium hyperplasia (6.1 %), carcinoma (4.4 %) and chronic endometritis (4.2 %) [11].

In the USA, the median age of menopause women is 51 years, while across the Europe, the mean and median age of natural menopause onset is higher reaching 50.7 years and 54.25 years, respectively [12]. At younger ages they are recorded in Africa, e. g., in Morocco, with median age of 48.4 years. One study showed median age at menopause 47 years in Turkish women [13].

The importance of determining natural menopause age is accounted for by the fact that it is associated with an increased risk of noncommunicable diseases such as cardiovascular disease, osteoporosis, as well as endometrial and breast cancer [14]. Finally, recording several symptoms simultaneously lowers QoL.

QoL is a multidimensional concept that has been used in various disciplines such as sociology, professional occupation, politics, marketing, climatology, and healthcare. Menopause-related symptoms negatively impact on the QoL of perimenopausal women [15]. The Menopause-Specific Quality of Life Questionnaire (MENQOL) is a validated and effective tool for assessing menopausal symptoms, although in most studies was recommended to investigate its validity for practice. In 1996, the MENQOL questionnaire was proposed to assess QoL related to health in the menopausal period, which is widely used nowadays and, in many countries, confirmed reliability and validity among women experiencing menopause. The 2012 systematic review on assessing QoL for menopausal women, however, concluded that the MENQOL needed further testing and evaluation of various aspects of its psychometric properties. The MENQOL was first introduced in 2002 in China [16]. Very little information is available about QoL of menopausal women in developing countries [14].

Today, limited information regarding perimenopausal women with endometrial hyperplasia and QoL in other countries are available particularly few studies on symptoms and QoL in Baku were published. This study was aimed to determine prevalence and intensity of menopausal symptoms among women with endometrial hyperplasia and assess an impact of menopausal symptoms on QoL.

**Aim:** to assess the effects of several symptoms on QoL in perimenopausal women with endometrial hyperplasia and AUB.

## Materials and Methods / Материалы и методы

Our study was conducted by enrolling females visiting the Obstetrics and Gynecology Department II as well as the Oncology Department at the Azerbaijan Medical University, city of Baku. Clinical, laboratory and morphological examinational methods were used for examining all patients.

### Inclusion and exclusion criteria / Критерии включения и исключения

*Inclusion criteria:* perimenopausal women of 45–55-year age group with complaints of AUB and endometrial hyperplasia.

*Exclusion criteria:* women receiving hormone replacement therapy; women with medical or surgical menopause; pregnant or breastfeeding women.

### Medical history and complaints assessment / Анамнез и оценка жалоб

A total of 50 perimenopausal women (45–55-year age group), who visited our department with complaints of AUB and underwent endometrial biopsy were examined. All data including age, parity, onset and duration of complaints, interval and amount of bleeding, obstetrical, medical, and surgical interventions as well as any previous treatment history were recorded. All women were clinically evaluated for general, systemic, and gynecological examination including speculum and vaginal examination. For those who agreed to participate in the study, information was collected by face-to-face interview: each interview lasted for 10–15 minutes and all women were assured that findings would be recorded impersonalized and all materials would be stored confidentially. Participant's socio-demographic characteristics such as age, education, income, and all other data were collected.

### Endometrium assessment / Оценка состояния эндометрия

All patients were subjected to routine tests and ultrasound examination to rule out any uterine and adnexal pathology. Transvaginal sonography (TVS) is recommended as a first-line diagnostic method for detecting uterine pathology in women with AUB. TVS was performed in all patients. Endometrial thickness was measured by calculating the sum of 2 adjacent endometrial layers known as the endometrial echo complex (EEC). In the early follicular phase, EEC generally is 4 mm, whereas in the late luteal phase it thickens up to 12 mm. All women with endometrial hyperplasia (> 12 mm in premenopausal AUB) including high-risk women (with familial history of endometrial, ovarian or breast cancer, obesity, diabetes) suffered from pain, bleeding, and dysuria. Dilation and curettage (D&C) were performed in all patients as a common procedure performed for women with AUB. Endometrial tissue histopathological examination (HPE) was performed in all patients by sending tissue samples to the Department of Pathology.

### Anemia assessment / Оценка анемии

Total blood count allowed to find mild and moderate anemia in 12 and 5 patients, respectively.

### Quality of life assessment / Оценка качества жизни

Several menopausal symptoms were experienced within the last 1 month prior to the study and assessed by using the MENQOL – Intervention Questionnaire [16]. An overall review on assessing QoL questionnaires in menopausal women allowed to conclude that the MENQOL questionnaire was the most frequently used diagnostic tool for assessing QoL in menopausal women. The questionnaire was translated into Azerbaijani and back to English, and consisted of the 29 items covering the four domains: physical (16 items), vasomotor (3 items), psychosocial (7 items), and sexual (3 items) in accordance with the 7-point Likert scale ranging from 0 – bothered not at all, up to 6 – extremely bothered. For the analysis, score 1 for “No” and 2 for “Yes” were taken. The mean scores of the symptoms in each domain were computed by dividing the sum of scores by the number of participants. Socio-demographic characteristics and the prevalence of several symptoms were analyzed and presented as means and percentages.

### Ethical aspects / Этические аспекты

At this study it was took into account the compliance of the methods with the ethical standards of the 1964 Declaration of Helsinki and subsequent amendments thereto. Oral and written informed consent were obtained from all study patients. Each examined patient was informed about the nature of personal disease, proposed examination, treatment options, and inclusion in research study that was approved by the Local Ethics Committee of the Azerbaijan Medical University (protocol No. 10 dated of 29.11.2019).

### Statistical analysis / Статистический анализ

The data collected were analyzed by using the MS Excel worksheet 2007 (Microsoft, USA) as a master chart. Next, these data were tabulated and analyzed as per objectives and were calculated as a rate: the percentage of each sign (symptom) was calculated. At the QoL analysis the mean scores of the symptoms in each domain were computed by dividing the sum of scores by the number of participants. Socio-demographic characteristics and the prevalence of several symptoms were analyzed and presented as percentages.

## Results and Discussion / Результаты и обсуждение

### General characteristics and comorbidities / Общая характеристика и сопутствующие заболевания

A total of 50 women were interviewed. The distribution by age was as follows: 45–50-year age group – 24 women (48 %), 50–55-year age group – 26 women (52 %).

The majority (95 %) of subjects were literate and had higher secondary and university degree, of which 92 %

were employed. Most of them (94 %) pursued an active lifestyle, whereas few (6 %) of them preferred a sedentary lifestyle. Out of 50 women, 43 were married, 5 – divorced, and 2 – widowed. Regarding to socioeconomic class, 75 % of subjects belonged to Class I (high-income group) and 25 % were in Class II–IV (middle- and low-income group).

All patients were divided to 3 groups according to the degree of obesity: 5 patients – grade I (10 %), 4 patients – grade II (8 %), and 3 patients – grade III (6 %). In addition, we observed 4 (8 %) patients with coronary heart disease, 8 (16 %) patients with type II diabetes mellitus, 8 patients (16 %) with hypertension and 2 (4 %) patients with bronchial asthma.

#### Rate of menopausal symptoms / Частота менопаузальных симптомов

The majority (the total of 97.14 %) of women experienced at least five or more menopausal symptoms. Vasomotor symptoms were experienced as hot flushes (80 %), sweating (70 %), and night sweating (62 %). Most of women suffered from physical symptoms such as frequent back pain in the lumbar region (96 %), decrease in physical strength (92 %), generalized weakness, tiredness (90 %), weight gain (80 %), pain in the neck (90 %), generalized musculoskeletal pain (84 %), lack of energy (84 %), difficulty in sleeping (85 %), frequent flatulence problems (78 %), poor physical energy (78 %), changes in skin appearance, texture, and tone (50 %), stress incontinence while laughing or coughing (41 %), dryness of skin (60 %), increased frequency in micturition (32 %), bloating (80 %), and growth of facial hair (40 %). Of the participants reported, there were various problems such as depression of unknown reasons (20 %), anxiety and nervousness (20 %), dissatisfaction with personal life (44 %), poor memory (14 %), feeling low (14 %), impatience and irritability (12 %). Few of subjects expressed for the most of the time a desire to be left alone (4 %). Sexual problems such as change in sexual drive (20 %), vaginal dryness (10 %), and in few (10 %) cases avoided intimate contact with the partners were recorded (Table 1).

The prevalence of hot flushes combined with night sweating was lowest among women of Japanese (18 %) origin, while increased among Chinese (21 %), Caucasian (31 %), Hispanic (35 %), and African Americans (46 %) [1]. Psychological symptoms such as dissatisfaction with life, anxiety and nervousness, poor memory, accomplishing “less than I do” phenomenon, depression or sadness, impatience with other people, and wish to seclude were noted.

The prevalence of sexual symptoms varied in different groups of women by reporting fewer sexual symptoms in the present study vs. women of Caucasian descent.

In our study we found that perimenopausal women had a higher rate of vasomotor and physical symptoms that might be accounted for by fluctuating hormone level, such

as follicle-stimulating hormone (FSH) and estrogen, occurring during perimenopause.

#### Endometrial condition / Состояние эндометрия

Transvaginal sonography and endometrial tissue histopathological examination are necessary tools for detecting endometrial pathology in women of perimenopausal age suffering from AUB. TVS was performed in all patients revealing that endometrial thickness ranged within 13–21 mm.

**Table 1.** The prevalence of menopausal symptoms in perimenopausal women from 45–55-year age group suffering from abnormal uterine bleeding (n = 50).

**Таблица 1.** Распространенность симптомов менопаузы у женщин в перименопаузе в возрасте 45–55 лет с жалобами на аномальное маточное кровотечение (n = 50).

| Symptom<br>Симптом   | Prevalence, %<br>Распространенность, % |
|--|--|
| <b>Vasomotor symptoms</b><br><b>Вазомоторные симптомы</b>        |  |
| 1. Hot flushes   | 80.0                                   |
| 2. Night sweats  | 70.0                                   |
| 3. Sweating  | 62.0                                   |
| <b>Psychological symptoms</b><br><b>Психологические симптомы</b> |  |
| 4. Dissatisfaction with life                                     | 44.0                                   |
| 5. Anxiety and nervousness                                       | 20.0                                   |
| 6. Poor memory   | 14.0                                   |
| 7. Lowered performance   | 14.0                                   |
| 8. Depression or sadness   | 20.0                                   |
| 9. Impatience with other people                                  | 12.0                                   |
| 10. Wish to seclude  | 4.0                                    |
| <b>Physical symptoms</b><br><b>Физические симптомы</b>           |  |
| 11. Flatulence or gas pain                                       | 78.0                                   |
| 12. Muscle or joint aches  | 84.0                                   |
| 13. Tiredness or exhaustion                                      | 90.0                                   |
| 14. Difficulty in sleeping                                       | 85.0                                   |
| 15. Neck or head aches   | 90.0                                   |
| 16. Decreased physical strength                                  | 92.0                                   |
| 17. Decreased stamina  | 78.0                                   |
| 18. Lack of energy   | 84.0                                   |
| 19. Dried skin   | 60.0                                   |
| 20. Facial hair  | 40.0                                   |
| 21. Weight gain  | 80.0                                   |
| 22. Change in skin appearance, texture, and tone                 | 50.0                                   |
| 23. Bloating   | 80.0                                   |
| 24. Low back ache  | 96.0                                   |
| 25. Frequent urination   | 32.0                                   |
| 26. Involuntary urination while laughing or coughing             | 41.0                                   |
| <b>Sexual symptoms</b><br><b>Сексуальные симптомы</b>            |  |
| 27. Change in sexual desire                                      | 20.0                                   |
| 28. Vaginal dryness during intercourse                           | 10.0                                   |
| 29. Avoiding intimacy  | 10.0                                   |

AUB was recorded in 5 (10 %) patients with parity 1, 35 (70 %) – with parity 2, 8 (16 %) – with parity 3, 2 (4 %) women – with parity 4. Menstrual complaints in perimenopausal women enrolled into the study were as follows: menorrhagia (HMB) – in 25 (50 %) women, menometrorrhagia – in 15 (30 %), polymenorrhea – in 7 (14 %), amenorrhea followed by heavy bleeding – in 3 (6 %).

Histological examination revealed proliferative endometrium in 20 (40 %) cases, secretory endometrium – in 10 (20 %) cases, simple hyperplasia without atypia – in 10 (20 %) cases, simple hyperplasia with atypia – in 3 (6 %), complex hyperplasia without atypia – in 5 (10 %), complex hyperplasia with atypia – in 2 (4 %). In the present study, 22 (44 %) women and 28 (56 %) with AUB had endometrial thickness ranging 11–15 mm and 15–20 mm, respectively. Ultrasound examination allowed to identify 10 cases of fibroid uterus, 44 cases of bulky uterus with pelvic inflammatory disease, and 5 cases of adenomyosis. Endometrial malignancy was not detected in any patient.

#### Assessing quality of life / Оценка качества жизни

In our study, 50 perimenopausal women suffering from various menstrual complaints were examined and evaluated by the MENQOL. To our best knowledge, thus far it is first study conducted in the city of Baku assessing QoL in perimenopausal women with endometrial hyperplasia.

The may be multiple reasons for varying symptom

rates as the perimenopause is influenced by socio-demographic/sociocultural factors, economical stresses, general health status, individual characteristics of menopause, differences in lifestyle etc. Active lifestyle has been shown to have beneficial effects on satisfaction with life, physical and emotional well-being, and positively associated with minimal sleep disorders, mood swings, and better cognitive functions. Physically inactive women are mainly reported to have poor psychosocial health. Our study showed that physically active women living healthy life had better QoL score in physical, psychological, vasomotor, and sexual domains compared to those perceiving sedentary lifestyle and being physically inactive. Thus, physical activity improves the holistic QoL.

The current study revealed that age, education, socio-economic status, and active lifestyle were highly related to increased rate and intensity of menopausal symptoms, as well as poor physical, psychological, vasomotor, and sexual health-related QoL among women of post-reproductive period.

#### Conclusion / Заключение

The intensity of perimenopausal symptoms lowers QoL in everyday life of such women and corresponds to the manifested menopause-related symptoms. An integrative approach of care, addressing mind, body, and spirit would ensure that women might alter own lifestyle and health-promoting behavior to improve QoL.

| ARTICLE INFORMATION   | ИНФОРМАЦИЯ О СТАТЬЕ   |
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| Study protocol, individual participant data that underlie the results reported in this article, after deidentification (text, tables) will be available in our University's data warehouse beginning 9 months and ending 3 years following article publication except deposited metadata. Proposals should be directed to <a href="mailto:mic_amu@mail.ru">mic_amu@mail.ru</a> . To gain access, data requestors will need to sign a data access agreement. | Протокол исследования, данные об отдельных участниках, лежащие в основе результатов, представленных в этой статье, после деидентификации (текст, таблицы) будут доступны в хранилище данных нашего университета спустя 9 мес и до 3 лет после публикации статьи, кроме депонированных метаданных. Предложения должны быть направлены на почтовый ящик <a href="mailto:mic_amu@mail.ru">mic_amu@mail.ru</a> . Чтобы получить доступ, лица, запрашивающие данные, должны будут подписать соглашение о доступе к данным. |
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## References / Литература:

1. Nisar N., Sohoo N.A. Severity of menopausal symptoms and the quality of life at different status of menopause: a community based survey from rural Sindh, Pakistan. *Int J Collaborative Res Intern Med Public Health*. 2010;2(5):118–30.
2. Avis N.E., Ory M., Matthews K.A. et al. Health-related quality of life in a multiethnic sample of middle-aged women: Study of Women's Health Across the Nation (SWAN). *Med Care*. 2003;41(11):1262–76. <https://doi.org/10.1097/01.MLR.0000093479.39115.AF>.
3. Berecki-Gisolf J., Begum N., Dobson A.J. Symptoms reported by women in midlife: Menopausal transition or aging? *Menopause*. 2009;16(5):1021–9. <https://doi.org/10.1097/gme.0b013e3181a8c49f>.
4. Chedraui P., San Miguel G., Avila C. Quality of life impairment during female menopausal transition is related to personal and partner factors. *Gynecol Endocrinol*. 2009;25(2):130–5. <https://doi.org/10.1080/09513590802617770>.
5. Funmilola M.O., Taiwo O. Experience of menopausal symptoms by women in an urban community in Ibadan, Nigeria. *Menopause*. 2009;16(4):822–30. <https://doi.org/10.1097/gme.0b013e318198d6e7>.
6. Loutfy I., Abdel Aziz F., Dabbous N. Women's perception and experience of menopause: a community-based study in Alexandria, Egypt. *East Mediterr Health J*. 2006;12(2):93–106. <https://apps.who.int/iris/handle/10665/117198>.
7. Peeyananjarassri K., Cheewadhanaraks S., Hubbard M. et al. Menopausal symptoms in a hospital-based sample of women in southern Thailand. *Climacteric*. 2006;9(1):23–9. <https://doi.org/10.1080/13697130500487422>.
8. Robin G., Baffet H., Catteau-Jonard S. et al. Perimenopause or menopausal transition. *Endocrinol Gynecol Obstet*. 2012;21:243–56.
9. Avis N.E., Colvin A., Bromberger J.T. et al. Change in health-related quality of life over the menopausal transition in a multiethnic cohort of middle-aged women: Study of Women's Health Across the Nation. *Menopause*. 2009;16(5):860–9. <https://doi.org/10.1097/gme.0b013e3181a3cdaf>.
10. Munro M.G., Critchley H.O., Broder M.S., Fraser I.S., FIGO Working Group on Menstrual Disorders. FIGO classification system (PALM-COIN) for causes of abnormal uterine bleeding in non gravid women of reproductive age. *Int J Gynaecol Obstet*. 2011;113(1):3–13. <https://doi.org/10.1016/j.ijgo.2010.11.011>.
11. Saraswathi D., Thanka J., Shaline R. et al. Study of endometrial pathology in abnormal uterine bleeding. *J Obstet Gynecol India*. 2011;61(4):426–30. <https://doi.org/10.1007/s13224-011-0047-2>.
12. Dravta J., Real F., Schindler C. et al. Is age at menopause increasing across Europe? Results on age at menopause and determinants from two population-based studies. *Menopause*. 2009;16(2):385–94. <https://doi.org/10.1097/gme.0b013e31818aefef>.
13. Vehid S., Aran S., Koksall S. et al. The prevalence and the age at the onset of menopause in Turkish women in rural area. *Saudi Med J*. 2006;27(9):1381–6.
14. Norozi E., Mostafavi F., Hasanzadeh A. et al. Factors affecting quality of life in postmenopausal women, Isfahan, 2011. *J Educ Health Promot*. 2013;2:58. <https://doi.org/10.4103/2277-9531.120857>.
15. Poomalar G.K., Arounassalame B. The quality of life during and after menopause among rural women. *J Clin Diagn Res*. 2013;7(1):135–9. <https://doi.org/10.7860/JCDR/2012/4910.2688>.
16. Lewis J.E., Hilditch J.R., Wong C.J. Further psychometric property development of the menopause-specific quality of life questionnaire and development of a modified version, MENQOL-Intervention questionnaire. *Maturitas*. 2005;50(3):209–21. <https://doi.org/10.1016/j.maturitas.2004.06.015>.

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